#26127 Integrating Pelvic Health and Orthopedic Programs to Treat Pelvic Floor Dysfunction in Female Runners

UCSF

University of California San Francisco Jennifer Kinder PT, DPTSc¹, Victor Cheuy PhD¹, Todd Davenport PT, PhD²

1. University of California San Francisco, 2. University of the Pacific



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Hypothesis / aims of study

Background: The female athlete population is at an increased risk for urinary incontinence. Few studies have investigated the use of a generalized home exercise program (HEP) at the community level to treat incontinence in sports, particularly running.

Objective: This study investigated whether a one-time pelvic health (PH) workshop with a generalizable HEP had positive changes in incontinence at the two-week and six-month follow-ups for female runners.

Aims: The aim of this pilot study is to determine the feasibility and efficacy of a generalized HEP, focused on pelvic health, and the changes reported in stress urinary incontinence, trunk weakness, and overall strength in female runners at two-week and six-month follow-up. The primary hypothesis is that a one-time, two hour, in-person educational workshop with an HEP for female runners will improve stress urinary incontinence and strength both in the short- (two-weeks) and long-term (six-months).

Study design, materials and methods

Participants attended a workshop about PH and received a PH- and orthopedic-based HEP. A blinded assessor evaluated overall trunk strength (CoreFirst^R Strategy, 0-5 scale) pre- and post- workshop. Questionnaires evaluated the frequency of leakage during activities. Time points were baseline (pre-workshop) and two-week and sixmonth follow-up. Paired t-tests, McNemar-Bowker tests, and Cochran's Q with Dunn post hoc tests were used for comparisons.

Results and interpretation

22 participants enrolled in the study (age: 44 ± 11 years; BMI: 22 ± 2 kg/m2). Trunk weakness improved after the workshop by 2 stages. HEP adherence was 86% and 55% through two-weeks and sixmonths, respectively. Significant improvements in the incidence of reported incontinence were found after two weeks for jumping (41 to 5%, p=.006), landing from jumping (46 to 9%, p=.003), coughing (64 to 14%, p=.001), sneezing (59 to 14%, p<.001), and walking to bathroom (59 to 32%, p=.016), and after six months for coughing (64 to 14%, p=.001), and sneezing (59 to 23%, p=.006).

Table 1 Trunk Strength

	Beginning of	End of	
Forward Side	Workshop	Workshop	р
Right	2.33 (1.00, 3.33)	4.50 (3.33, 5.00)	.001
Left	2.33 (1.00, 4.58)	4.33 (3.33, 4.67)	.001

Data presented as median (IQR).

Table 2 Leakage Experiences

Activity	Ne	ver	Onc	e or More	
	n	%	n	%	p¶
Jumping up					.006
Baseline	13	59.1	9	40.9	
[†] 2 weeks post	21	95.5	1	4.5	
6 month post	19	86.4	3	13.6	
Coming down					
from jumping					.004
Baseline	12	54.5	10	45.5	
[†] 2 weeks post	20	90.9	2	9.1	
6 month post	17	77.3	5	22.7	
Running					.045
Baseline	10	45.5	12	54.5	
2 weeks post	15	68.2	7	31.8	
6 month post	16	72.7	6	27.3	
Approaching					
finish line					.067
Baseline	15	68.2	7	31.8	
2 weeks post	18	81.8	4	18.2	
6 month post	21	95.5	1	4.5	
Coughing					<.001
Baseline	8	36.4	14	63.6	
[†] 2 weeks post	19	86.4	3	13.6	
[†] 6 month post	19	86.4	3	13.6	
Sneezing					<.001
Baseline	9	40.9	13	59.1	
[†] 2 weeks post	19	86.4	3	13.6	
[†] 6 month post	17	77.3	5	22.7	
Walking to					
bathroom					.012
Baseline	9	40.9	13	59.1	
[†] 2 weeks post	15	68.2	7	31.8	
6 month post	14	63.6	8	36.4	
Hearing running					
water					.105
Baseline	18	81.8	4	18.2	
2 weeks post	21	95.5	1	4.5	
6 month post	21	95.5	1	4.5	



Figure 2: Trunk Assessment utilizing CoreFirst^R Strategy.



[¶]Cochran's Q Test; [†] difference from baseline statistically significant by Dunn post hoc tests with Bonferroni correction.



Figure 3: Integrated pelvic and orthopedic generalized HEP.





Conclusions

Educating female runners and providing a generalized HEP focused on PH had immediate positive significant changes in overall trunk strength and incontinence at two weeks, and generally maintained through six months.

References

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